ForumIAS

F

Prelims Marathon

14th to 20th September,2020

HISTORY
ECONOMICS
POLITY
SCIENCE AND TECHNOLOGY
GEOGRAPHY AND ENVIRONMENT

History

Q.1) Which of the following pair (s) is/are correctly matched?

Ancient name : Significance

Maha-danda-nayaka
 Chief judicial officer
 Nagarashreshthi
 City councilor
 Prathama-kulika
 Village chief

Select the correct answer using the code given below:

a) 1 only

b) 1 and 2 only

c) 2 and 3 only

d) 3 only

ANS: A

Explanation: Important Posts (Assemblies and Individuals) in Ancient period: Mahadanda-nayaka - chief judicial officer.

- kumar-amatya, meaning an important minister,
- sandhi-vigrahika, meaning a minister of war and peace.
- Nagarashreshthi or chief banker or merchant of the city.
- The **sarthavaha** or leader of the merchant caravans.
- **prathama-kulika** or the chief craftsman.
- And the head of the kayasthas or scribes.
- **Q.2)** With reference to **Chola inscriptions** mention several categories of land, which of the following pair (s) is/are correctly matched?

1. Brahmadeya : land gifted to Brahmanas

2. shalabhoga : land for the maintenance of a school3. vellanvagai : land donated to Jaina institutions

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: B

Explanation: Chola inscriptions mention several categories of land:

- **Vellanvagai** land of non-Brahmana peasant proprietors
- Brahmadeya land gifted to Brahmanas
- Shalabhoga land for the maintenance of a school
- **devadana, tirunamattukkani** land gifted to temples
- pallichchhandam land donated to Jaina institutions
- **Q.3)** In 1318 the poet Amir Khusrau noted that there was a different language in every region of Indian sub continent. Which of the following pair (s) is/are correctly matched?

Region:Language spoken1. Southern Karnataka:Dvarsamudri2. Kerala:Ma'bari

3. Bengal : Hindawi

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: A

Explanation: In 1318 the poet Amir Khusrau noted that there was a different language in every region of this land: Sindhi, Lahori, Kashmiri, Dvarsamudri (in southern Karnataka), Telangani (in Andhra Pradesh), Gujari (in Gujarat), Ma'bari (in Tamil Nadu), Gauri, (in Bengal) ... Awadhi (in eastern Uttar Pradesh) and Hindawi (in the area around Delhi).

Q.4) "Three dynasties of medieval India continuously fought for the **city of Kanauj in the ganga valley**". Which of the following are the three dynasties of tripartite struggle?

- 1. Rashtrakutas
- 2. Gurjara Pratiharas
- 3. Palas
- 4. Chahmanas

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2 and 4 only
- d) 1, 3 and 4 only

ANS: A

Explanation: For centuries, rulers belonging to the Gurjara-Pratihara, Rashtrakuta and Pala dynasties fought for control over Kanauj.

Because there were three "parties" in this longdrawn conflict, historians often describe it as the "tripartite struggle".

- **Q.5)** Which of the following statement is **NOT** correct about Chola temples of 9th century to 12th century?
- a) They are not only worship/religious places but also the centres of craft production.
- b) They were endowed with land by rulers as well as by others.
- c) The produce of this land went into maintaining the specialists in and around temples and also for maintenance of state army.
- d) None.

ANS: C

Explanation: The big temples of Thanjavur and Gangaikondacholapuram, built by Rajaraja and Rajendra, are architectural and sculptural marvels.

- Chola temples often became the nuclei of settlements which grew around them.
- These were centres of craft production. Temples were also endowed with land by rulers as well as by others.
- The produce of this land went into maintaining all the specialists who worked at the temple and very often lived near it priests, garland makers, cooks, sweepers, musicians, dancers, etc.
- In other words, temples were not only places of worship; they were the hub of economic, social and cultural life as well.

- **Q.6)** Which of the following statement is **NOT** correct about tawarik in Delhi sultanate period?
- a) The authors of tawarikh lived in cities and hardly ever in villages.
- b) They often wrote their histories for Sultans in the hope of rich rewards.
- c) These authors advised rulers on the need to preserve an ideal social order based on birthright and gender distinctions.
- d) Their ideas were shared by everybody.

ANS: D

Explanation: Although inscriptions, coins and architecture provide a lot of information, especially valuable are "histories", tarikh (singular)/tawarikh (plural), written in Persian, the language of administration under the Delhi Sultans.

The authors of tawarikh were learned men: secretaries, administrators, poets and courtiers, who both recounted events and advised rulers on governance, emphasising the importance of just rule.

Keep the following additional details in mind:

- The authors of tawarikh lived in cities (mainly Delhi) and hardly ever in villages.
- They often wrote their histories for Sultans in the hope of rich rewards.
- These authors advised rulers on the need to preserve an "ideal" social order based on birthright and gender distinctions.
- Their ideas were not shared by everybody.

Q.7) "Mohiniattam or Mohiniyattam" is an Indian classical dance form that evolved in which of the following state?

- a) Karnataka
- b) Tamil Nadu
- c) Andhra Pradesh
- d) Kerala

ANS: D

Explanation: Mohiniattam or Mohiniyattam is an Indian classical dance form that evolved in the state of Kerala, India, and is counted among the two popular dance arts of the state, the other being Kathakali.

- Although its roots date back to the age-old Sanskrit Hindu text on performing arts
 called 'Natya Shastra', similar to other Indian classical dance forms, Mohiniattam
 adheres to the Lasya type that showcases a more graceful, gentle and feminine form
 of dancing.
- Mohiniattam derives its name from the word 'Mohini', a female avatar of Lord Vishnu. Conventionally a solo dance performed by female artists, it emotes a play through dancing and singing where the song is customarily in Manipravala which is a mix of Sanskrit and Malayalam language and the recitation may be either performed by the dancer herself or by a vocalist with the music style being Carnatic.

Q.8) Consider the following statements regarding the "Indian National Association":

- 1. It was founded by Dadabhai Naoroji.
- 2. It demanded holding of civil service examination in India only.

Which of the statements given above is/are **NOT** correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: The Indian Association of Calcutta (also known as the Indian National Association) superseded the Indian League and was founded in 1876 by younger nationalists of Bengal led by Surendranath Banerjea and Ananda Mohan Bose, who were getting discontented with the conservative and pro-landlord policies of the British Indian Association.

The Indian Association was the most important of pre- Congress associations and aimed to "promote by every legitimate means the political, intellectual and material advancement of the people." It set out to—

- Create a strong public opinion on political questions, and
- Unify Indian people in a common political programme.

It protested against the reduction of age limit in 1877 for candidates of the Indian Civil Service examination.

- The association demanded simultaneous holding of civil service examination in England and India and Indianisation of higher administrative posts.
- It led a campaign against the repressive arms act and the vernacular press act.

Q.9) "Treaty of Ryswick" was concluded between which of the following nations in 17th Century?

- a) French & English
- b) French & Portuguese
- c) French & Dutch
- d) Dutch & Portuguese

ANS: C

Explanation: The French position in India was badly affected with the outbreak of war between the Dutch and the French.

- Bolstered by their alliance with the English since the Revolution of 1688, the Dutch captured Pondicherry in 1693.
- Although the Treaty of Ryswick concluded in September 1697 restored Pondicherry to the French, the Dutch garrison held on to it for two more years.

Q.10) Consider the following statements regarding "Pitts India Act of 1784":

- 1. It gave the British government a large measure of control over the Company's affairs.
- 2. The presidencies of Bombay and Madras were made subordinate to the governor-general.
- 3. No prohibition was placed on aggressive wars and treaties.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only

ANS: B

Explanation: The Pitt's India Act gave the British government a large measure of control over the Company's affairs.

- In fact, the Company became a subordinate department of the State. The Company's territories in India were termed 'British possessions'.
- The government's control over the Company's affairs was greatly extended. A Board of Control consisting of the chancellor of exchequer, a secretary of state and four members of the Privy Council (to be appointed by the Crown) were to exercise

control over the Company's civil, military and revenue affairs. All dispatches were to be approved by the board. Thus a dual system of control was set up.

- In India, the governor-general was to have a council of three (including the commander-in-chief), and the presidencies of Bombay and Madras were made subordinate to the governor-general.
- A general prohibition was placed on aggressive wars and treaties (breached often).



Economy

- **Q.1)** With reference to the ongoing apprehension of United States of America towards "**Developing Country**" status, which of the following statement is **NOT** correct?
- a) World Trade Organization (WTO) does not formally classify any of its members as a developing country.
- b) Individual countries are allowed to unilaterally classify themselves as developing economies.
- c) As many as two-thirds of the 164 members of the WTO have classified themselves as developing countries.
- d) The developing country status allows a member of the WTO to seek permanent exception from the commitments under various multilateral trade agreements ratified by the organization.

ANS: D

Explanation: The "developing country" status allows a member of the **WTO** to seek temporary exception from the commitments under various multilateral trade agreements ratified by the organization.

- It was introduced during the initial days of the WTO as a mechanism to offer some respite to poor countries while they try to adjust to a new global trade order marked by lower barriers to trade.
- Countries such as India and China, while seeking exception from various WTO agreements, have argued that their economic backwardness should be considered when it comes to the timeline of implementation of these agreements.
- The issue of farm subsidies, for instance, is one over which rich and poor countries have had major disagreements.
- The WTO, however, does not formally classify any of its members as a developing country.
- Individual countries are allowed to unilaterally classify themselves as developing economies.
- So, as many as two-thirds of the 164 members of the WTO have classified themselves as developing countries.
- **Q.2)** Which of the following statement is **NOT** correct about recommendations of economic capital framework Committee headed by Bimal Jalan?
- a) It recommended the economic capital of realized equity and revaluation balances should be distributed between RBI and Central Government.
- b) It recognized that RBI's provisioning for monetary, financial and external stability risks is the country's savings for a monetary or financial stability crisis.
- c) It recommended the Contingent Risk Buffer (CRB) to be maintained within a range of 6.5% to 5.5% of the RBI's balance sheet.
- d) None.

ANS: A

Explanation: The RBI had formed a committee chaired by former Governor Bimal Jalan to review its economic capital framework and suggest the quantum of excess provision to be transferred to the government.

- The committee was formed after a demand from the government for more money. The RBI Board has accepted all the recommendations of the Jalan committee.
- The Reserve Bank of India (RBI) at its board meeting (August 2019) decided to transfer a whopping ₹1.76 lakh crore to the Centre including interim dividend of ₹28,000 crore paid in February which is likely to address the precarious fiscal situation of the government to a great extent.
- The panel recommended a clear distinction between the two components of economic capital realized equity and revaluation balances.
- It was recommended that realized equity could be used for meeting all risks/ losses as they were primarily built up from retained earnings, while revaluation balances could be reckoned only as risk buffers against market risks as they represented unrealized valuation gains and hence were not distributable.
- The committee also recognised that RBI's provisioning for monetary, financial and external stability risks is the country's savings for a 'rainy day', (a monetary or financial stability crisis), which has been consciously maintained with the RBI in view of its role as the Monetary Authority and the Lender of Last Resort.
- "This risk provisioning made primarily from retained earnings is cumulatively referred to as the Contingent Risk Buffer (CRB) and has been recommended to be maintained within a range of 6.5% to 5.5% of the RBI's balance sheet," the RBI statement said.

Q.3) The "Partial Credit Guarantee Scheme (PCGS)" is often seen in news is related to which of the following?

- a) It allows public sector banks to purchase high-rated pooled assets from financially sound NBFCs and housing finance companies (HFCs).
- b) It provides low interest loans to Small and Medium Enterprises (SME's).
- c) It provides low cost loans on the lines of Mudra Bank to Self-help groups.
- d) It provides low cost capital to start-ups.

ANS: A

Explanation: The Centre had announced the PCGS in July 2019, allowing public sector banks to purchase high-rated pooled assets from financially sound NBFCs and housing finance companies (HFCs).

- As a part of its Aatmanirbhar initiative, finance minister had extended the scheme in May to cover primary market issuance of bonds by NBFCs, HFCs and micro finance institutions (MFIs) with low credit ratings.
- The idea was to provide liquidity support to institutions with low credit ratings and ensure continuity of credit support to small businesses.

Q.4) Consider the following statements regarding the "gig economy":

- 1. It undermines the traditional economy of full-time workers who rarely change positions and instead focus on a lifetime career.
- 2. India is the 5th largest country for flexi-staffing.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: Gig economy can be defined as a work engagement where on one side, there is a service seeker i.e. a consumer with a demand for a specific task, and on the other side, and there is a service provider i.e. a gig worker who can perform that specific task.

- A gig economy undermines the traditional economy of full-time workers who rarely change positions and instead focus on a lifetime career.
- In this economy, tech-enabled platforms connect the consumer to the gig worker to hire services on a short-term basis.
- Gig workers include self-employed, freelancers, independent contributors and parttime workers.
- The digital gig economy generated a gross volume of approximately \$204 bn from worldwide customers in 2018.
- Transportation-based services contributed to over 50% of this value. The size of the gig economy is projected to grow by a 17% CAGR and generate a gross volume of ~\$455 bn by 2023.
- India has emerged as the 5th largest country for flexi-staffing after US, China, Brazil and Japan.
- Haryana, Madhya Pradesh, Andhra Pradesh, Gujarat and Telangana have most opportunities in terms of growth for the flexi-workers.

Q.5) With reference to recent merger of public sector banks, which of the following pair (s) is/are correct matched?

Bank (s) : Merged into

Oriental Bank of Commerce and United Bank
 Syndicate Bank
 Central Bank of India

3. Andhra Bank and Corporation Bank : Canara Bank

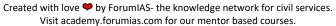
Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: A

Explanation: The largest of the mergers announced is that of Punjab National Bank with Oriental Bank of Commerce and United Bank.

- The amalgamated entity to be called Punjab National Bank will become the second-largest public sector bank in India, after the State Bank of India.
- It will also become the second-largest bank in India in terms of its branch network, with a combined total of 11,437 branches.
- The second merger announced was that of Canara Bank and Syndicate Bank, which would render the merged entity the fourth-largest public sector bank.
- The merger also has the potential to lead to large cost reductions due to network overlaps, adding that the similar business cultures of the two banks would also facilitate a smooth transition.
- The third merger is of Union Bank of India with Andhra Bank and Corporation Bank, the Finance Minister said, which would make the merged entity the fifth largest public sector bank.
- This merger would have the potential to increase the post-merger bank's business by 2-4.5 times.
- The fourth merger announced is of Indian Bank and Allahabad Bank.



• This, too, would lead to a doubling of the size of the business and would also lead to a huge potential for scaling up due to the complementary networks of the two banks.

Following all these mergers, the country will have a total of 12 public sector banks, half of which—Punjab National Bank, Canara Bank, Union Bank of India, Indian Bank, State Bank of India, and Bank of Baroda—will be able to compete at a global level.

Q.6) Consider the following statements regarding the transfer of surplus capital of RBI to central government:

- 1. RBI appointed Bimal Jalan Committee to review the surplus transfer to central government under Economic Capital Framework (ECF).
- 2. In last five years the surplus transfer by RBI to central government was continuously increased.

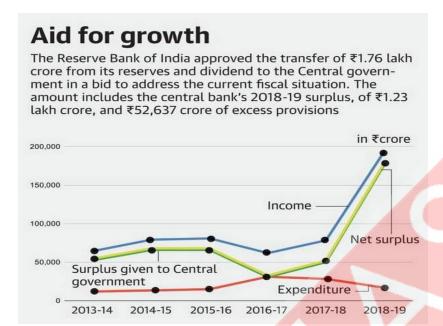
Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: A

Explanation: On August 26, the Reserve Bank of India (RBI) central board decided to transfer ₹1.76 lakh crore to the government (including a sum of ₹52,637 crore from its contingency reserve), a move that is likely to address the Central government's precarious fiscal situation.

- The transfer amount included the payment of dividend worth ₹1.23 lakh crore, and funds from its reserves, as identified under a new economic capital framework (ECF) adopted by the RBI board.
- The RBI had formed a committee chaired by former RBI Governor Bimal Jalan to review its ECF last year.
- Each year, the RBI transfers to the government any money in its balance sheet that it deems to be beyond its operational and contingency needs. The RBI's transfer of funds to the government per se is nothing new.
- But what has raised eyebrows this time is that the amount of funds being transferred by the central bank to the government this year is much higher than earlier 146.8% more than what it had paid out last year, when it transferred ₹50,000 crore as dividend.
- Previously, the highest amount of surplus funds that the RBI had transferred to the government was ₹65,896 crore in 2014-15.
- The net surplus figures are: ₹52,683 (2013-14); ₹65,896 (2014-15); ₹65,880 (2015-16); ₹30,659 (2016-17) and ₹50,000 (2017-18).



Q.7) Consider the following statements regarding the "Financial Benchmarks India Private Ltd":

- 1. It was jointly promoted by Reserve Bank of India, Fixed Income Money Market & Derivative Association of India (FIMMDA) and Indian Banks Association.
- 2. It was recognized by Reserve bank of India as an independent Benchmark administrator. Which of the statements given above is/are correct?
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: B

Explanation: In terms of recommendations of the Committee on Financial Benchmarks set up by Reserve Bank of India (February 2014) to review the systems governing major financial benchmarks in India, Fixed Income Money Market & Derivative Association of India (FIMMDA) and Foreign Exchange Dealers' Association of India (FEDAI) were identified as benchmark administrators for the Indian rupee interest rate benchmarks and Foreign exchange benchmarks respectively.

- Financial Benchmark India Private Ltd (FBIL) was jointly promoted by Fixed Income Money Market & Derivative Association of India (FIMMDA), Foreign Exchange Dealers' Association of India (FEDAI) and Indian Banks' 'Association (IBA).
- It was incorporated on 9th December 2014 under the Companies Act 2013.
- It was recognised by Reserve bank of India as an independent Benchmark administrator on 2nd July 2015.
- The company is run by a Board of Directors, assisted by an oversight committee.
- The main object of the company is to act as the administrators of the Indian interest
 rate and foreign exchange benchmarks and to introduce and implement policies and
 procedures to handle the benchmarks.
- It also will make policies for possible cessation of any benchmark and to follow steps for ensuring orderly transition to the new benchmarks.
- FBIL will review each benchmark to ensure that the benchmarks accurately represent the economic realities of the interest that it intends to measure.

• It will take up/consider such other benchmarks as may be required from time to time by periodically assessing the emerging needs of the end -users.

Q.8) The "Reserve Bank of India (RBI) made it mandatory for all banks to link floating rate loans — to an external benchmark". Which of the following are comes under external bench mark rates?

- 1. Repo rate
- 2. Reverse repo rate
- 3. Three month Treasury bill yield
- 4. Six month Treasury bill yield

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 1, 3 and 4 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

ANS: B

Explanation: The Reserve Bank of India (RBI) made it mandatory for all banks to link floating rate loans — to retail customers and loans to micro, small and medium enterprises (MSME) — to an external benchmark.

- Some banks have already started to link home and auto loan rates to the repo rate, which is an external benchmark.
- "The RBI, therefore, has issued a circular making it mandatory for banks to link all new floating rate personal or retail loans and floating rate loans to MSMEs to an external benchmark effective October 1, 2019."
- The norms for external benchmark linking of interest rates was scheduled to be operational from April 1, but was deferred.
- At present, interest rates on loans are linked to a bank's marginal cost of fund-based interest rate (MCLR).
- Banks can choose from one of the four external benchmarks repo rate, three-month treasury bill yield, six-month treasury bill yield or any other benchmark interest rate published by Financial Benchmarks India Private Ltd.

Q.9) Consider the following statements regarding the "World Gold Council":

- 1. It is an inter-governmental body under International Monetary Fund.
- 2. India is among top five countries of highest gold reserves.

Which of the statements given above is/are **NOT** correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: The World Gold Council's 28 Members are some of the world's most forward-thinking gold mining companies. They are headquartered across the world and have mining operations in over 45 countries.

India has piped the Netherlands to move into the list of top ten countries in terms of total gold reserves.

• According to the World Gold Council, India has gold reserves totalling 618.2 tonnes, which is marginally higher than the Netherlands' reserves of 612.5 tonnes.

- Interestingly, in terms of individual countries, India actually ranks ninth since the International Monetary Fund (IMF) occupies the third position after the U.S. and Germany.
- According to the latest release by the World Gold Council, U.S. leads the country list with total gold reserves of 8,133.5 tonnes followed by Germany with 3,366.8 tonnes.
- While the IMF is ranked third with a holding of 2,451.8 tonnes, it is followed by countries such as Italy (2,451.8 tonnes), France (2,436.1 tonnes), Russia (2,219.2 tonnes), China (1,936.5 tonnes), Switzerland (1,040 tonnes) and Japan (765.2 tonnes) before India at the 10th spot.

India's entry into the list of top ten countries comes at a time when the quantum of monthly purchases is the lowest in over three years.

Q.10) Which of the following are the International Credit Rating Agencies?

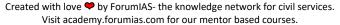
- 1. S & P
- 2. Moody's
- 3. Fitch
- 4. DBRS

Select the correct answer using the code given below:

- a) 1, 2 and 4 only
- b) 2, 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

ANS: D

Explanation: Presently, India is rated by six international credit rating agencies, namely Standard and Poor's (S&P), Moody's Investor Services, FITCH, Dominion Bond Rating Service (DBRS), the Japanese Credit Rating Agency (JCRA), and the Rating and Investment Information Inc., Tokyo(R&I).



Polity

Q.1) "Partnerships for Affordable Healthcare Access and Longevity (PAHAL) – project"

is often seen in news is launched with the help of which of the following nation?

- a) France
- b) Japan
- c) Israel
- d) United States of America

ANS: D

Explanation: Partnerships for Affordable Healthcare Access and Longevity (PAHAL) is USAID flagship innovative financing platform to promote health financing models and provide catalytic support to social enterprises (IBMs) for improving access to affordable and quality healthcare solutions for the urban poor communities, with a with a focus on Tuberculosis, Maternal and Child Health and WASH.

- PAHAL has built a platform that provides unparalleled access to social enterprises for reducing cost and improving access to quality healthcare services.
- US announced that it will provide an additional \$3 million to India, through its aid agency USAID, for mitigating the spread of Covid-19.
- In coordination with the Indian government, USAID is providing these funds to the Partnerships for Affordable Healthcare Access and Longevity (PAHAL) project.

Q.2) "The freedoms of the air are a set of commercial aviation rights granting a country's airlines the privilege to enter and land in another country's airspace". With reference to the **freedom of air**, which of the following statements is/are correct?

- 1. Total six freedoms of air rights formed by International Civil Aviation Organization (ICAO).
- 2. The sixth freedom of air includes the right to fly from a foreign country to another while stopping in one's own country for non-technical reasons.

Select the correct answer using the code given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: B

Explanation: The freedoms of the air (9 rights) are a set of commercial aviation rights granting a country's airlines the privilege to enter and land in another country's airspace.

- The Freedom of air was formulated in the Convention on International Civil Aviation of 1944, known as the Chicago Convention.
- The fifth freedom of air includes the right to fly between two foreign countries on a flight originating or ending in one's own country.
- The sixth freedom of air includes the right to fly from a foreign country to another while stopping in one's own country for non-technical reasons.

Q.3) "Loya Jirga or Grand Council" is often seen in news is related to which of the following country?

a) Nepal

- b) Bhutan
- c) Bangladesh
- d) Afghanistan

ANS: D

Explanation: A Loya Jirga, or "grand council", is a mass national gathering that brings together representatives from the various ethnic, religious, and tribal communities in Afghanistan.

- The gathering involves participation of Afghan tribal elders, religious figures, and political leaders.
- The Loya Jirga is a centuries-old institution that has been convened at times of national crisis or to settle national issues.
- Historically, it has been used to approve a new constitution, declare war, choose a new king, or to make sweeping social or political reforms.
- It is considered the "highest expression" of the Afghan people, but it is not an official decision-making body.

Q.4) "Most Favoured Nation (MFN)" is often seen in news is related to which of the following International Organization?

- a) International Monetary Fund
- b) United Nations
- c) World Economic Forum
- d) World Trade Organization

ANS: D

Explanation: According to the MFN principle of the WTO's General Agreement on Tariffs and Trade (GATT), each of the WTO member countries should "treat all the other members equally as 'most-favoured' trading partners."

- If a special favour such as a lower customs duty rate is grant to someone by a nation, then it has to do the same for all other WTO members.
- Thus, in effect it means non-discrimination.
- Recently, India withdrew the Most Favored Nation (MFN) status from Pakistan.

Q.5) "Asia Reassurance Initiative Act (ARIA)" is recently in news is an initiative of which of the following country?

- a) Russia
- b) China
- c) Japan
- d) United States of America

ANS: D

Explanation: US President has signed ARIA act to counter the threat from China and to reinvigorate US leadership in the Indo-Pacific region.

- It aims to establish a multifaceted U.S. strategy to increase U.S. security, economic interests, and values in the Indo-Pacific region.
- The new law mandates actions countering China's illegal construction and militarization of artificial features in the South China Sea and coercive economic practices.
- ARIA recognizes the vital role of the strategic partnership between the U.S. and India in promoting peace and security in the Indo-Pacific region and it calls for strengthening diplomatic, economic, and security ties between both the countries.

• It allocates a budget of \$1.5 billion over a five year period to enhance cooperation with America's strategic regional allies in the region.

Q.6) Which of the following are "Nordic countries"?

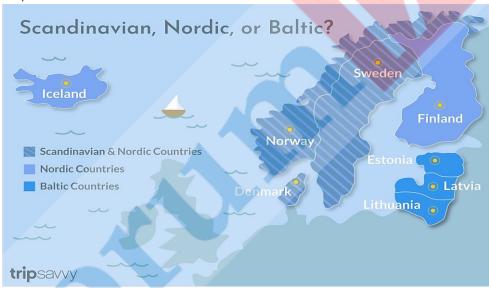
- 1. Iceland
- 2. Denmark
- 3. Finland
- 4. Sweden
- 5. Norway

Select the correct answer using the code given below:

- a) 1, 2, 3 and 4 only
- b) 2, 3, 4 and 5 only
- c) 2, 3 and 5 only
- d) 1, 2, 3, 4 and 5

ANS: D

Explanation: Nordic countries include Finland, Iceland, Norway, Denmark, Sweden, and the Faroe Islands (an archipelago of islands as an autonomous country within the kingdom of Denmark).



Q.7) "Kholongchhu Hydroelectric Project" is often seen in news is a joint initiative between India and which of the following country?

- a) Thailand
- b) Myanmar
- c) Bhutan
- d) Nepal

ANS: C

Explanation: India and Bhutan have signed a concession agreement on the 600 MW Kholongchhu Hydroelectric Project (KHEL) for work to start on it.

- The hydroelectric project will be the first-ever Joint Venture project to be implemented in Bhutan under an Inter-Governmental Agreement (IGA) signed in 2014.
- The joint venture partners of the project are India's Satluj Jal Vidyut Nigam Limited (SJVNL) and Druk Green Power Corporation Limited (DGPC).

- **Q.8)** The "High Impact community Development Partnership" initiative often seen in news is a joint initiative between India and?
- a) Sri Lanka
- b) Bangladesh
- c) Maldives
- d) Madagascar

ANS: C

Explanation: HICDPs constitute an important dimension of the dynamic development partnership between India and the Maldives.

- Under HICDP, India and Maldives have committed to execute projects under a total grant of USD 5.5 million.
- These projects are driven by the needs of communities on the islands.
- They will be implemented by City and Local Councils.
- It will enhance the capacities of locally-elected representatives and support the decentralization efforts of the Government of Maldives.
- Recently, India and Maldives signed a contract for setting up Neighborhood Fish Processing Plants at two of the islands in the neighboring country.

Q.9) Consider the following statements regarding "Union Public Service Commission (UPSC)":

- 1. Articles 315 to 323 of the Indian Constitution related to UPSC.
- 2. It consists of a chairman and other members appointed by the President of India.
- 3. Parliament determines the conditions of service of the chairman and other members of the Commission.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

ANS: A

Explanation: Union Public Service Commission (UPSC) is the central recruiting agency in India. It is an independent constitutional body in the sense that it has been directly created by the Constitution.

- Articles 315 to 323 in Part XIV of the Constitution contain elaborate provisions regarding the composition, appointment and removal of members along with the independence, powers and functions of the UPSC.
- The UPSC consists of a chairman and other members appointed by the president of India.
- The Constitution, without specifying the strength of the Commission has left the matter to the discretion of the president, who determines its composition.
- Usually, the Commission consists of nine to eleven members including the chairman.
- Further, no qualifications are prescribed for the Commission's membership except that one-half of the members of the Commission should be such persons who have held office for at least ten years either under the Government of India or under the government of a state.
- The Constitution also authorizes the president to determine the conditions of service of the chairman and other members of the Commission.

Q.10) Consider the following statements regarding "Inter-State council":

- 1. Article 263 contemplates the establishment of an Inter-State Council to effect coordination between the states and between Centre and states.
- 2. Parliament can establish such a council to serve the public interest.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: A

Explanation: Article 263 contemplates the establishment of an Inter-State Council to effect coordination between the states and between Centre and states.

- Thus, the President can establish such a council if at any time it appears to him that the public interest would be served by its establishment.
- He can define the nature of duties to be performed by such a council and its organisation and procedure.



Science and technology

Q.1) Consider the following statements regarding "World Food Safety Day (WFSD)":

- 1. The first world food safety day was celebrated in 2015.
- 2. World food safety day 2019 theme was "Food Safety, everyone's business".
- 3. It is organized by Food and Agriculture Organization in collaboration with World Health Organization.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: C

Explanation: The first-ever "World Food Safety Day" adopted by the Food and Agriculture Organization of the United Nations in collaboration with WHO, will be celebrated on 7th of June 2019 under the theme "Food Safety, Everyone's Business".

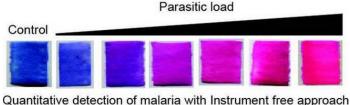
Q.2) Recently, which Indian Institute of technology (IIT) has developed a paper based test kit for malaria detection?

- a) Indian Institute of technology (IIT) Guwahati
- b) Indian Institute of technology (IIT) Madras
- c) Indian Institute of technology (IIT) Bombay
- d) Indian Institute of technology (IIT) Kanpur

ANS: A

Explanation: With over one million reported cases in 2017, malaria still continues to be a burden for India and most countries of south-east Asia.

- Now, a group of researchers from IIT Guwahati has developed a simple detection method that uses an instrument when in the lab or a piece of chromatographic paper when in the field.
- The kit can be used to detect Plasmodium parasite, which causes malaria and also specifically detect Plasmodium falciparum, a notorious species.
- Using an ordinary syringe fitted with a small magnet, magnetic beads and few chemicals inside, the researchers were able to specifically capture the antigen released by the parasites in the blood of malaria patients.
- When the captured antigens interact with specific substrates inside the syringe, the blue dye turns pink. The dye is then adsorbed over a modified chromatographic paper.
- The formation of pink colour on the paper is a direct indication of the presence of parasites in the blood serum.
- The intensity of the colour increases when the concentration of antigen is high.



Quantitative detection of malaria with instrument free approach

Q.3) Consider the following statements:

- 1. In scram-jet technology, combustion of fuel takes place in a chamber in the missile at supersonic speeds.
- 2. In ram jet system where the system collects the air it needs from the atmosphere during the flight at subsonic speeds and the propellants burn in the combustion chamber.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: In scram-jet technology, combustion of fuel takes place in a chamber in the missile at supersonic speeds.

This is different from a ram jet system where the system collects the air it needs from the atmosphere during the flight at subsonic speeds and the propellants burn in the combustion chamber.

TYPES OF ATMOSPHERIC JET ENGINES

TURBOJET **TURBOFAN** RAMJET SCRAMJET Turboiets are the oldest A turbofan is essentially a A ramjet is nothing more A scramjet is identical to a and most general purpose turbojet but with a large than a turbojet with all of ramjet, but with one difference: jet engines, finding use in a the rotating parts ducted fan that provides combustion occurs with the air additional thrust by moving large variety of removed. Ramjets are moving at supersonic velocities. applications. They are most primarily used with large amount of low As a result, scramjets are efficient at supersonic velocity air around the missiles, due estimated not to work well velocities, and are capable main engine. This type of to their simple, small, and below Mach 5, but could possibly reach speeds of Mach 24 (18000 of speeds around Mach 3. engine is more efficient high-velocity design They were also found on mph). than turboiets at subsonic the Concorde and the speeds. Ex. Boeing 747. Tupolev Tu-144.

Q.4) The term "**Total Polar Compounds**" is often seen in news is related to which of the following?

- a) Edible oils
- b) Crude oil
- c) Ocean deposits
- d) Cosmetics and Shampoos

ANS: A

Explanation: During frying, oil undergoes degradation due to their exposure to elevated temperatures which result in changes in the physico-chemical, nutritional and sensory properties of the oil.

- Polar compounds are formed during frying.
- The toxicity of these compounds is associated with several diseases such as hypertension, atherosclerosis, Alzhemeimer's disease liver diseases etc.
- Therefore, it is essential to monitor the quality of vegetable oils during frying.

- In order to safeguard consumer health, FSSAI has fixed a limit for Total Polar Compounds at 25% beyond which the vegetable oil shall not be used. Therefore, Vegetable Oils should not be repeatedly used for frying.
- The estimation of Total Polar Compounds (TPC) is a widely accepted parameter to decide whether the oil is safe for further use or not.
- The TPC Value is considered a better indicator since it refers to all degraded products from the initial triglycerides present in the oil.

Q.5) Consider the following statements regarding the "five-day annual International Pulsar Timing Array (IPTA) meet":

- 1. It is hosted by Pune based National Centre for Radio Astrophysics (NCRA).
- 2. The IPTA is a collaboration of radio astronomers from a dozen countries across the globe.
- 3. It uses more than 12 radio telescopes all over the world with an aim to detect ultra-low frequency gravitational waves.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: D

Explanation: The Pune-based National Centre for Radio Astrophysics (NCRA) is all set to host the five-day annual International Pulsar Timing Array (IPTA) meet from June 17 to 21.

- The IPTA is a collaboration of radio astronomers from a dozen countries across the globe.
- It uses more than 12 radio telescopes all over the world with an aim to detect ultralow frequency gravitational waves.
- More than 40 expert international astronomers and 30 international students are expected to participate in the event, besides several Indian participants.
- "The upgrade of the Giant Metrewave Radio Telescope (GMRT) in Pune and the Ooty Radio Telescope (ORT) has helped us meet the parameters for being a full member of the IPTA.
- The current status of the quest for ultra-low frequency Gravitational Waves and the roadmap for future technical and scientific challenges is to be the main focus of the meeting.
- These waves are wrinkles in space-time produced by two massive black holes, each revolving around the other.
- Such black holes, which weigh billion times more than our Sun, are found in the centres of colliding galaxies.
- These waves affect radio pulses from 10km size stars called radio pulsars by changing ever so slightly the period of radio pulsation of these stars.

Q.6) Consider the following statements regarding "Cell for IPR Promotion and Management (CIPAM)":

- 1. It is a professional body which ensures focused action on issues related to IPRs.
- 2. It works under Department of Science & Technology.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: A

Explanation: A professional body under the aegis of Department for Promotion of Industry and Internal Trade (DPIIT) which ensures focused action on issues related to IPRs and addresses the 7 identified objectives of the policy.

- CIPAM assists in simplifying and streamlining of IP processes, apart from undertaking steps for furthering IPR awareness, commercialization and enforcement.
- Simplifying and streamlining of IP processes by formulating and implementing a focused strategy for each policy objective
- Coordination with State level agencies and Ministries/ Departments of the Government of India, industry bodies as well as international agencies; IP cells to be set up
- IPR awareness campaign across the country in schools, colleges/universities and the industry
- Training and sensitization porgrammes for enforcement agencies and Judiciary; coordination for effective enforcement of IPR rights.
- Study and facilitate implementation of best practices for promotion and commercialization of IP within the country

Q.7) "Lunar X Prize" is recently in news is sponsored by which of the following social media giant?

- a) Face Book
- b) Google
- c) YouTube
- d) Twitter

ANS: B

Explanation: The Google Lunar XPRIZE (GLXP), sometimes referred to as Moon 2.0, was a 2007–2018 inducement prize space competition organized by the X Prize Foundation, and sponsored by Google.

The challenge called for privately funded teams to be the first to land a robotic spacecraft on the Moon, travel 500 meters, and transmit back to Earth high-definition video and images.

Q.8) The "Berne Convention of 1886" is related to which of the following?

- a) Primary Health Care
- b) Environmental Protection
- c) Global peace
- d) Intellectual property rights

ANS: D

Explanation: The Berne Convention, adopted in 1886, deals with the protection of works and the rights of their authors.

- It provides creators such as authors, musicians, poets, painters etc. with the means to control how their works are used, by whom, and on what terms.
- It is based on three basic principles and contains a series of provisions determining the minimum protection to be granted, as well as special provisions available to developing countries that want to make use of them.

Q.9) Consider the following statements regarding "Intensified Mission Indhradhanush (IMI)":

- 1. It has been launched to reach each and every child under two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme.
- 2. It targets to immunize all children against seven vaccine preventable diseases.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: It has been launched by the Government of India to reach each and every child under two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme.

- It targets to immunize all children against seven vaccine preventable diseases namely Diphtheria, Pertussis, Tetanus, Childhood Tuberculosis, Polio, Hepatitis B and Measles.
- In addition to this, vaccines for Japanese Encephalitis, Haemophilus influenza type B, inactivated polio vaccine, Rotavirus vaccine and Measles Rubella vaccine are also being provided in selected states.

Q.10) Consider the following statements regarding "protection of plant varieties and farmers rights (PPV&FR) Act":

- 1. To recognize and protect the rights of farmers in respect of their contributions made at any time in conserving, improving and making available plant genetic resources.
- 2. To accelerate agricultural development in the country, protect plant breeders' rights. Which of the statements given above is/are correct?
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: To recognize and protect the rights of farmers in respect of their contributions made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties.

- To accelerate agricultural development in the country, protect plant breeders' rights;
- stimulate investment for research and development both in public & private sector for the development new of plant varieties.
- Facilitate the growth of seed industry in the country, to ensure the availability of high quality seeds and planting material to the farmers.
- The protection period is for 15 years, and 18 years in the case of trees and vines.
- Establishes Plant Varieties Protection Appellate Tribunal (PVPAT): The decisions of the PVPAT can be challenged in High Court.
- The Tribunal shall dispose of the appeal within one year.

Geography

- **Q.1)** The term "Yarrabubba Crater" is often seen in news is located in which of the following place?
- a) Australia
- b) France
- c) Siberia
- d) Namibia

ANS: A

Explanation: The Yarrabubba crater is an asteroid impact structure, the eroded remnant of a former impact crater, situated in the Mid-West Western Australia.

- It as a precise age of 2.229 billion years, it is the oldest known impact structure on Earth
- According to recent study, Australia's Yarrabubba asteroid impact crater is oldest on earth and it may have been responsible for ending an ice age.
- Other older asteroid crater are the Vredefort Dome in South Africa (2.023 billion years old) and Canada's Sudbury Basin (1.850 billion years old).
- These are the only other precisely dated Precambrian impact structures that are currently known.
- Originally stretching roughly 70 km wide, the Yarrabubba resisted reliable estimates of its age because of erosion and plate tectonics.
- It is now an elliptical structure with a diameter of approximately 20 km.
- Q.2) Arrange the following time scales of geological time scale in ascending order:
- 1. Epoch
- 2. Age
- 3. Era
- 4. Period
- 5. Eon

Select the correct answer using the code given below:

- A. 2, 4, 3, 1, 5
- B. 2, 1, 4, 3, 5
- C. 1, 2, 3, 4, 5
- D. 1, 2, 4, 3, 5

ANS: B

Explanation:

e	Eon	Era	Period		Epoch	Taday
Older ~ Younger	Phanerozoic	Cenozoic	Quaternary		Holocene	← Today ← 11.8 Ka
					Pleistocene	11.0 Ka
			Neogene		Pliocene	
					Miocene	
			Paleogene		Oligocene	
					Eocene	
					Paleocene	← 66 Ma
		Mesozoic	Cretaceous		~	00 1018
			Jurassic		~	
			Triassic		~	← 252 Ma
		Paleozoic	Permian		~	232 IVIA
			Carboni- ferous	Pennsylvanian	~	
				Mississippian	~	
			Devonian		~	`
			Silurian		~	
			Ordovician		~	
			Cambrian		~	→ 541 Ma
	Proterozoic	~	~		~	2.5 Ga
	Archean	~	~		~	4.0 Ga
	Hadean	~		~	~	4.54 Ga

- Q.3) Consider the following statements regarding the "Indian Ocean Dipole":
- 1. It is an irregular oscillation of sea-surface temperatures in which the western Indian Ocean becomes alternately warmer and then colder than the eastern part of the ocean.
- 2. It affects the strength of monsoons over the Indian subcontinent. Which of the statements given above is/are correct?
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: The Indian Ocean Dipole (IOD), also known as the Indian Niño, is an irregular oscillation of sea-surface temperatures in which the western Indian Ocean becomes alternately warmer (positive phase) and then colder (negative phase) than the eastern part of the ocean.

- The IOD involves a periodic oscillation of sea-surface temperatures (SST), between "positive", "neutral" and "negative" phases.
- The IOD also affects the strength of monsoons over the Indian subcontinent.
- The IOD is one aspect of the general cycle of global climate, interacting with similar phenomena like the El Niño-Southern Oscillation (ENSO) in the Pacific Ocean.

Q.4) The term "**Limiting Factor – Vehicle**" is often seen in news is related to which of the following?

- a) Missile controller
- b) Re usable launch pads
- c) Deep submersibles
- d) Unmanned Aerial Launch pads

ANS: C

Explanation: The Limiting Factor is a two-man vessel that is capable of diving to full ocean depth.

• It is the world's first and only manned-submersible that will be certified for dives to 11,000 m / 36,000 ft.

- A team of scientists is preparing to dive deep into the depths of the Indian Ocean into a "Midnight Zone" where light barely reaches but life still thrives.
- Scientists from the British-led Nekton Mission plan to survey wildlife and gauge the effects of climate change in the unexplored area.
- Working with the Seychelles and Maldives governments, the five-week expedition is targeting seamounts — vast underwater mountains that rise thousands of meters from the sea floor.
- To explore such inhospitable depths, Nekton scientists will board one of the world's most advanced submersibles, called "Limiting Factor."

Q.5) The terms "Ciara & Sabina" is often seen in news is related to which of the following?

- a) Typhoons of south China
- b) Tropical cyclones of Indonesia
- c) Storm in Northern Europe
- d) None

ANS: C

Explanation: On February 9 - 2020, a major storm hit northern Europe, disrupting travel and public events in the region.

- The storm, named 'Ciara' in the UK, is expected to hit Ireland, France, Belgium, the Netherlands, Switzerland, and Germany. In Germany, it is being referred to as 'Sabine'.
- The storm has two names because there isn't yet a pan-European system in place for labeling weather systems.
- Hurricane-force winds up to 129 kph battered the country, the strongest since 2013. Trains, flights, and ferries were cancelled and weather warnings were issued at several places.

Q.6) Which of the following pair (s) is/are correctly matched?

Gas Field : Nation

1. Jebel Ali : United Arab Emirates

2. North Field : Russia3. South Pars : Qatar

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only

ANS: A

Explanation: On February 3 - 2020, the United Arab Emirates (UAE) announced it had discovered a new natural gas field with 80 trillion standard cubic feet (tscf) of shallow gas resources.

- The gas field discovery, reportedly the largest in the world since 2005, holds the potential of helping UAE's gas self-sufficiency, reducing its reliance on neighbouring Qatar for the fuel.
- The reservoir, named '**Jebel Ali**', is located between the emirates of Dubai and Abu Dhabi, which along with five other emirates form the UAE.
- According to officials, it spans around 5,000 square kilometres.
- According to a Bloomberg report, the gas find is the largest since the discovery of the **Galkynysh field in Turkmenistan** in 2005.



- At 80 tscf, the new reservoir would now be ranked the fourth largest by size in the Middle East, behind the North Field in Qatar, South Pars in Iran, and the Bab field in Abu Dhabi.
- The Qatari and Iranian fields are part of the same deposit.

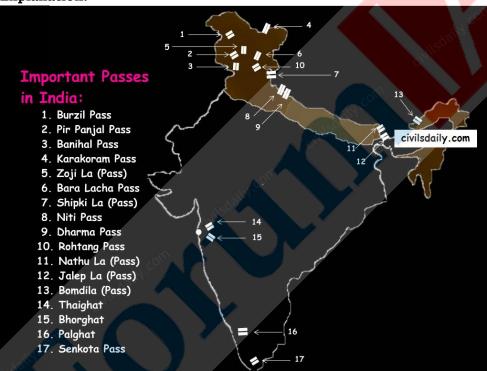
Q.7) Arrange the following mountain passes from east to west:

- 1. Bomdila Pass
- 2. Dharma Pass
- 3. Jalep La Pass

Select the correct answer using the code given below:

- a) 1 2 3
- b) 2 1 3
- c) 1 3 2
- d) 2 3 1

ANS: C Explanation:



Q.8) Which of the following lake (s) consists of Panama Canal?

- 1. Gatun Lake
- 2. Alajuela Lake
- 3. Miraflores Lake

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: D

Explanation: The canal consists of artificial lakes, several improved and artificial channels, and three sets of locks. An additional artificial lake, Alajuela Lake (known during the

American era as Madden Lake), Gatun Lake and Miraflores lake acts as a reservoir for the canal.

Q.9) According to the Forest Survey of India (FSI) – 2019, which state recorded **highest** number of forest fire alerts?

- a) Madhya Pradesh
- b) Maharashtra
- c) Nagaland
- d) Mizoram

ANS: D

Explanation: About 21.40% of forest cover in India is prone to fires, with forests in the north-eastern region and central India being the most vulnerable, the 2019 report by the Forest Survey of India (FSI) has said.

- The forest fire points (FFP) identified during the 13 years add up to 2,77,758.
- They were analysed using a moderate resolution imaging spectroradiometer (MODIS) by overlaying the points coverage over the grid coverage of 5 km x 5 km.
- The total number of alerts issued for each state based on MODIS data from November 2018 to June 2019 was 29,547 and interestingly, Mizoram, a small State, recorded the highest number of fire alerts (2,795).
- The seven States of the north-eastern region accounted for 10,210 fire alerts, which make up about one-third of alerts in the country.
- Central Indian States also recorded a high number of forest fire alerts, with Madhya Pradesh accounting for 2,723 alerts; Maharashtra 2,516; Odisha 2,213 and Chattisgarh 1,008 alerts between November 2018 to June 2019.

Q.10) Consider the following statements:

- 1. Mesosphere lies above Stratosphere and extends up-to a height of 120km.
- 2. The ionosphere contains electrically charged particles known as ions, and hence, it is known as ionosphere.
- 3. The stratosphere extends up to a height of 50 km and it contains the ozone layer.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: C

Explanation: The stratosphere is found above the tropo-pause and extends up to a height of 50 km. One important feature of the stratosphere is that it contains the ozone layer.

- This layer absorbs ultra-violet radiation and shields life on the earth from intense, harmful form of energy.
- The mesosphere lies above the stratosphere, which extends up to a height of 80 km.
- In this layer, once again, temperature starts decreasing with the increase in altitude and reaches up to minus 100°C at the height of 80 km.
- The upper limit of mesosphere is known as the mesopause. The ionosphere is located between 80 and 400 km above the mesopause.
- It contains electrically charged particles known as ions, and hence, it is known as ionosphere. Radio waves transmitted from the earth are reflected back to the earth by this layer.

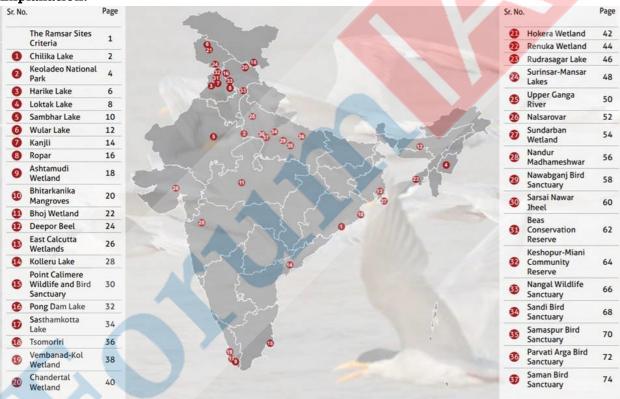
Environment

- Q.1) Which of the following are the "Ramsar sites" in India?
- 1. Majauli Island
- 2. Pulicat Lake
- 3. Point Calimere

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 3 only
- c) 3 only
- d) 2 and 3 only

ANS: C Explanation:



- **Q.2)** "A comment article in Nature, published on November 27 2019, draws attention to the alarming possibility that certain climate thresholds related to the earth as a system may be on the verge of being breached. The study points out nine such elements which may be closer to the tipping point that calculated and worse, that they may be interlinked in a way that has a global cascading effect". Which of the following are the "**9 tipping points**"?
- 1. Global Warming
- 2. Boreal Forests
- 3. Coral reefs
- 4. Permafrost
- 5. Atlantic Ocean circulation
- 6. Amazon rain forest

Select the correct answer using the code given below:

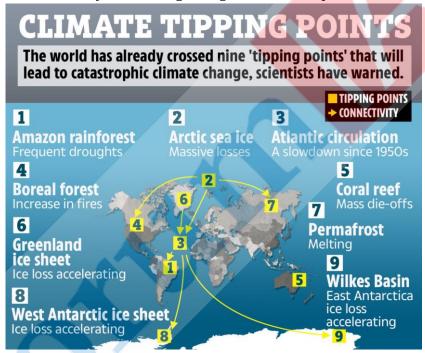
- a) 1, 2, 3, 4 and 5 only
- b) 2, 3, 4, 5 and 6 only
- c) 2, 3, 4 and 5 only
- d) 1, 2, 3, 4, 5 and 6

ANS: B

Explanation: The world could be heading toward tipping points in the climate system.

- In an interconnected climate system, passing one tipping point may trigger a cascade of irreversible changes.
- As the world continues to warm, some call for urgent global action to avert an "existential threat to civilization."
- We may be about to pass or may already have passed tipping points in the Earth's climate, according to a group of leading scientists.

The scientist's analyzed evidence on these nine components of our climate system – called "tipping points" because they are under growing threat of abrupt and irreversible changes.



Q.3) Which of the following species is/are found in National Chambal Sanctuary?

- 1. Gharials
- 2. Fresh water river dolphins
- 3. Smooth-coated otters

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: D

Explanation: The National Chambal Sanctuary, that stretches over the Chambal River (that spreads to Madhya Pradesh and Rajasthan).

• The sanctuary was granted Protected Area Status in 1979, to revive the gharial population that was once subject to rampant poaching.



- This river is home to freshwater river dolphins.
- The river is home to a variety of birds as well, including sandpipers and egrets and bar-headed geese.
- The **red-naped ibis and Ruddy shelduck**, as well as painted storks that added a dash of colour to the stark landscape.
- The famed gharials, crocodiles and the critically endangered red-crowned roofed turtles.
- The **smooth-coated otters** reside in Chambal Sanctuary

Q.4) Which of the following pair (s) is/are correctly matched?

State butterfly:State1. Tamil Yeoman:Tamil Nadu2. Common Peacock:Uttarakhand3. Blue Mormon:Maharashtra

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: D

Explanation: Tamil Nadu became the fifth State to declare a State butterfly and Tamil Yeoman bagged the distinction.

Maharashtra (Blue Mormon), Kerala (Malabar Banded Peacock), Uttarakhand (Common Peacock) and Karnataka (Southern Bird-wing).

Q.5) Which of the following pair (s) is/are correctly matched?

National Park : River cuts through
1. Valley of flowers : Pushpavati River

2. Panna National Park
3. Kaziranga National Park
5. Manas River
6. Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: B

Explanation: Pushpawati River flows through the Valley of Flowers in Chamoli district in Garhwal region of the Indian state of Uttarakhand.

- The forests of Panna National Park along with Ken Gharial Wildlife Sanctuary and adjoining territorial divisions form a significant part of the catchment area of the 406 km (252 mi) Ken River which runs northeast for about 72 km (45 mi) through the park.
- Kaziranga is a vast stretch of tall elephant grass, marshland and dense tropical moist broadleaf forests crisscrossed by four main rivers Brahmaputra, Diphlu, Mora Diphlu and Mora Dhansiri and has numerous small water bodies.
- **Q.6)** As per the "National Bio-fuel Policy 2018", which of following fuels used for transportation or stationary applications that qualify as bio-fuels?
- 1. Bio-ethanol

- 2. Bio-diesel
- 3. Drop in fuels

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: D

Explanation: The scope of the National Bio-fuels Policy encompasses following categories of fuels as "Biofuels" which can be used as transportation fuel or in stationery applications:—

- **'bioethanol'**: ethanol produced from biomass such as sugar containing materials, like sugar cane, sugar beet, sweet sorghum etc.; starch containing materials such as corn, cassava, rotten potatoes, algae etc.; and, cellulosic materials such as bagasse, wood waste, agricultural and forestry residues or other renewable resources like industrial waste;
- **'biodiesel'**: a methyl or ethyl ester of fatty acids produced from non-edible vegetable oils, acid oil, used cooking oil or animal fat and bio-oil;
- 'Advanced biofuels': Fuels which are (1) produced from lignocellulosic feedstocks (i.e. agricultural and forestry residues, e.g. rice & wheat straw/corn cobs & stover/bagasse, woody biomass), non-food crops (i.e. grasses, algae), or industrial waste and residue streams, (2) having low CO2 emission or high GHG reduction and do not compete with food crops for land use. Fuels such as Second Generation (2G) Ethanol, Drop-in fuels, algae based 3G biofuels, bio-CNG, bio-methanol, Di Methyl Ether (DME) derived from bio-methanol, biohydrogen, drop in fuels with MSW as the source / feedstock material will qualify as "Advanced Biofuels".
- 'drop-in fuels': Any liquid fuel produced from Biomass, agri-residues, wastes such as Municipal Solid Wastes (MSW), Plastic wastes, Industrial wastes etc. which meets the Indian standards for MS, HSD and Jet fuel, in pure or blended form, for its subsequent utilization in vehicles without any modifications in the engine systems and can utilize existing petroleum distribution system.
- 'bio-CNG': Purified form of bio-Gas whose composition & energy potential is similar to that of fossil based natural gas and is produced from agricultural residues, animal dung, food waste, and MSW and Sewage water.

Q.7) Recently, which of the following "International Organization/Bank" has announced that it would stop funding fossil fuel projects at the end of 2021?

- a) International Monetary Fund
- b) Asian Development Bank
- c) European Investment Bank
- d) New Development Bank

ANS: C

Explanation: The European Investment Bank said that it would stop funding fossil fuel projects at the end of 2021, in a landmark decision.

- The ban on funding comes into effect a year later than originally proposed after lobbying by European Union member states.
- Under the new policy, energy projects applying for EIB funding will need to show they can produce one kilowatt hour of energy while emitting less than 250 grams of carbon dioxide, a move which bans traditional gas-burning power plants.

- Gas projects are still possible, but would have to be based on what the bank called "new technologies," such as carbon capture and storage, combining heat and power generation or mixing in renewable gases with the fossil natural gas.
- The European Commission has only an observer role on the EIB board, but the powerful EU executive body has much sway and holds the power to cast a deciding vote at a deadlock between the bank's current 28 shareholders, the EU member states.
- There was no need for that as the bank said that members representing 90% of its capital had approved the new energy lending policy.
- The EIB, the biggest multilateral lender in the world, has ambitious goals on sustainable finance.
- **Q.8)** Recently, which of the following Lake is affected by "avian botulism" a neuro-muscular illness caused by a toxin which is produced by a bacterial strain led to mass mortality of birds?
- a) Kolleru Lake
- b) Chilika Lake
- c) Sambhar Lake
- d) Pulicat Lake

ANS: C

Explanation: The Indian Veterinary Research Institute (IVRI), Bareilly, confirmed avian botulism — a neuro-muscular illness caused by a toxin which is produced by a bacterial strain — as the reason for mass mortality of birds, including migratory species from Northern Asia, at Sambhar Lake in Rajasthan.

- The laboratory tests conducted on the samples of carcasses collected from the lake confirmed the disease infecting the birds, the probability of which was earlier stated by veterinarians in the State.
- The illness, caused by a bacterium called Clostridium botulinum, affected the nervous system of birds, leading to flaccid paralysis in their legs and wings and neck touching the ground.
- More than 18,000 carcasses of birds have been removed from the lake and its catchment area so far, raising concern among environmentalists and ornithologists.
- The scientists at IVRI found the samples infested with maggots of third stage with a clear indication that the avian mortality had occurred over a period of time.
- **Q.9)** Consider the following statements regarding the "**1t.org**":
- 1. It is a global initiative to grow, restore and conserve 1 trillion trees around the world.
- 2. It is launched by World Bank.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: A

Explanation: World Economic Forum, Davos has launched a global initiative to grow, restore and conserve 1 trillion trees around the world - in a bid to restore biodiversity and help fight climate change.

• The initiative aims to unite and promote reforestation efforts worldwide through fund mobilization and political support.

- The 1t.org project aims to unite governments, non-governmental organizations, businesses and individuals in a "mass-scale nature restoration".
- 1t.org offers innovative technologies, which will serve to connect tens of thousands of small and large groups around the world that are engaged in tree planting and forest restoration.

Q.10) "Dachigam national park" is often seen in news is located in which of the following State/Union Territory?

- a) Pondicherry
- b) Himachal Pradesh
- c) Jammu & Kashmir
- d) Arunachal Pradesh

ANS: C

Explanation: Dachigam National Park is located 22 km from Srinagar in Jammu and Kashmir.

- The name literally stands for 'ten villages', which could be in memory of the ten villages that were relocated in order to create the park.
- The Park is only 141 sq. kms. and roughly rectangular in shape, approximately 23.5km by 6km.
- It is best considered as two sections Upper and Lower Dachigam.
- Lower Dachigam, in the west, comprises approximately a third of the total area and is the area most accessible to a visitor.
- Upper Dachigam in the east extends over the higher reaches and is a good day's trek from the nearest road head.
- Dachigam was initially established to ensure the supply of clean drinking water to Srinagar city.
- A protected area since 1910, it was declared as a national park in 1981.
- The park is best known as the home of the hangul, or Kashmir stag.



Reports and Organizations

Q.1) Which of the following pair (s) is/are correctly matched?

Personality : **Associated with** 1. William Carey : Serampore mission

2. Jonathan Duncan : Sanskrit college at Benaras
3. James mill : Supported Orentialists
Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: B

Explanation: Serampore Mission: William Carey founded Baptist Missionary Society in Britain, the first of its kind in that country in 1793.

- His mission was to preach the Gospel and convert believers to Christianity.
- Carey established a charity school first for the poor native boys in Madnbutty (North Bengal) as soon as he was able to settle there in 1794.
- At the far end of the 18th Century, the Baptist Missionary Society of England, sent four other missionaries, Marshman, Ward, Bransdon and Grant to join Carey, Fountain and Thomas in Bengal.
- They arrived here on the 13th of October, 1799. As they had no license to enter British East India Company's territory, the new missionaries took shelter in the tiny settlement of Denmark, Serampore, which was on the western bank of the river Hooghly, 20 Km. north of Calcutta.
- The Danish Governor, Colonel Bie, took them under his protection and permitted them gladly to settle there for their missionary work.
- Carey joined the new missionaries in Serampore. He arrived there on the 10th of January, 1800 and on the same day founded Serampore Mission.

Jonathan Duncan: In 1791 the efforts of Jonathan Duncan, the British resident at Benares, bore fruit and a Sanskrit College was opened at Benares for the "cultivation of the laws, literature and religion of Hndus".

James Mill: From the early nineteenth century many British officials began to criticize the Orientalist vision of learning. James Mill was one of those who attacked the Orientalists.

Q.2) Consider the following statements regarding the "Indian Universities Act, 1904":

- 1. It lay down that the number of fellows of a university shall not be less than fifty nor more than a hundred.
- 2. The government approval was not necessary for grant of affiliation of colleges.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: A

Explanation: The main objective of the Act was to improve the condition of education in India and upgrade the system to a better level.

- Universities were given the right of teaching along with the right of conducting examination. In short, their scope was enlarged.
- Universities had the right to make provision for promotion of study and research, to appoint university professors and lecturers, set up university laboratories and libraries and undertake direct instruction of students.
- The Indian Universities Act, 1904 laid down that the number of Fellows of a university shall not be less than fifty or more than a hundred and a Fellow should normally hold office for a period of six years instead of for life.
- Upto this moment, the number of the seats in the Senate of the Universities was not fixed and the Government used to make life-long nominations. According to the Indian Universities Act, 1904, the number was fixed. The minimum number was fifty and the maximum number was hundred. Their term was determined for five years.
- The Indian Universities Act, 1904 introduced the principle of election in the constitution of the Senate. According to this Act, 20 fellows are to be elected in the Universities of Madras, Calcutta and Bombay and 15 in other Universities.
- The Indian Universities Act, 1904 gave statutory recognition to Syndicates and made provision for the adequate representation of university teachers in the university Senate.
- The Governor General was now empowered to decide a University's territorial limits and also affiliation between the universities and colleges.
- However, for better education and research a grant of Rs. 5 Lakh per year for 5 years was also accepted.

Q.3) Which of the following pair (s) is/are **NOT** correctly matched?

Newspaper/Publication : Associated person

1. The Bengal Gazette : James Augustus Hickey

2. Mirat – ul – Akbar : Sir Syed Ahmed Khan

3. Native Opinion : Gandhiji

Select the correct answer using the code given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 3 only

ANS: C

Explanation: The **James Augustus hickey** was published the first news paper in India entitled **the Bengal Gazatte**.

- The Mirat Ul Akbar was published by Raja Ram Mohan Roy.
- Vishvanath Narayan Mandlik, C.S.I. (The Most Exalted Order of the Star of India) (8 March 1833 9 May 1899) was an eminent Bombay citizen, lawyer, author and a legal expert on Hindu law.
- He founded a bi-weekly in English called the **Native Opinion** in 1864 to which he was the sole contributor in the early years.

Q.4) The "SolveDifferent" campaign was launched by which of the following Institution?

- a) World Economic Forum
- b) United Nations Environment Programme
- c) European Union
- d) International Union for Conservation of Nature (IUCN)

ANS: B

Explanation: For all the progress inspired by the Global Goals one barrier impedes them all: the choice we make in our everyday lives continues to fuel consumption and production habits that are increasingly extending beyond the limits of our planet.

Our (UNEP) #SolveDifferent campaign focuses on an informative and emotive approach to communicating the environmental cost of key consumption and production models.

Q.5) Which of the following initiatives are launched by International Union for Conservation of Nature (IUCN)?

- 1. Global Dry-land Initiative
- 2. Global Island Partnership
- 3. Global Mountain Initiative
- 4. Global Mangrove Management Initiative
- 5. Mangroves for the Future

Select the correct answer using the code given below:

- a) 1, 2, 3 and 5 only
- b) 2, 3, 4 and 5 only
- c) 2, 3 and 4 only
- d) 1, 2, 3, 4 and 5

ANS: D

Explanation: The Global Ecosystem Management Programme is involved in several initiatives that cut across its various programmes. They include;

- The Global Drylands Initiative (GDI): The Initiative strengthens natural resource governance in drylands through strengthening of resource rights, establishment of institutional mechanisms for ecosystem management, and development of enabling conditions for policy implementation and revision.
- **Global Island Partnership (GLISPA):** The scope of IUCN's Islands Initiative is those islands, whether large or small, whose conservation and ecosystem management challenges are substantially shaped by "island" characteristics, including high levels of species diversity and endemism, openness of coastal ecosystems to land-based impacts, competition by people for limited resources including land and fresh water, and vulnerability to external forces, both natural and human-induced. GLISPA has been in existance for about 10 years now.
- **Global Mountain Initiative:** This is an evolving young initiative, which has been in existance for about a year now. Mountain areas cover 24% of the Earth's land surface, are home to 12% of the global population, provide vital goods and services particularly freshwater to at least half of humanity, are key centres of biological and cultural diversity, and influence climates at many scales.
- Global Mangrove Management Initiative: This is an evolving young initiative, which has been in existance for about a year now Mangroves are continuously under threat from overharvesting, degradation and land reclamation. Yet we continue to cut them down unaware at times of the role these trees are playing within the coastal ecosystem.
- **Mangroves for the Future (MFF):** This is a unique partner-led initiative to promote investment in coastal ecosystem conservation for sustainable development.

Q.6) Which of the following **indicators used by Global Hunger Index** for ranking countries?

- 1. Undernourishment
- 2. Child wasting

- 3. Child stunting
- 4. Child mortality

Select the correct answer using the code given below:

- a) 1, 2 and 3 only
- b) 2 and 3 only
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4

ANS: D

Explanation: The 14thGlobal Hunger Index (GHI) 2019 was released recently and it had ranked India a lowly 102 among the 117 countries it had mapped.

- The GHI has been brought out almost every year by Welthungerhilfe (lately in partnerships with Concern Worldwide) since 2000.
- A low score gets a country a higher ranking which implies a better performance.
- The reason for mapping hunger is to ensure that the world achieves —Zero Hunger by 2030 one of the Sustainable Development Goals of the United Nations.

Four indicators of GHI -

- Undernourishment (which reflects inadequate food availability)
- Child Wasting (which reflects acute under nutrition)
- Child Stunting (which reflects chronic under nutrition)
- Child Mortality (which reflects both inadequate nutrition and unhealthy environment)

Q.7) The "Travel and Tourism Competitiveness Index" – is released by which of the following?

- a) World Economic Forum
- b) United Nations World Tourism organization
- c) OECD
- d) World Bank

ANS: A

Explanation: The Travel and Tourism Competitiveness Index (TTCI) is produced by the World Economic Forum (WEF).

- It measures the factors and policies that make a country a viable place to invest within the Travel and Tourism sector.
- India has secured 34th place in the Index.

Q.8) The "Nagpur Resolution" is often seen in news is related to which of the following?

- a) Green corridors
- b) Public participation
- c) Organic farming
- d) Electoral reforms

ANS: B

Explanation: Nagpur Resolution is a holistic approach for empowering citizens adopted during regional conference organized by DARPG in Nagpur.

• The conference was organized by the Department of Administrative Reforms and Public Grievances (DARPG), in collaboration with the Government of Maharashtra.

- The resolution aims to empower the citizens by policy interventions for better service delivery through timely updating of citizens charters, implementation of enactments and benchmarking standards for continuous improvement.
- It also aims to ensure timely publication of Good Governance Index to identify the quality of governance in 10 sectors especially those pertaining to welfare and infrastructure at the Union, State and District levels.

Q.9) The "**Spandana initiative**" is often seen in news is related to which of the following state?

- a) Tamil Nadu
- b) Kerala
- c) West Bengal
- d) Andhra Pradesh

ANS: It is an initiative of Andhra Pradesh Government to make police stations more approachable for the public, especially women.

- Spandana (means response) centers have been established within the premises of all District Collector offices and police stations.
- These centers mostly have a female receptionist and other staff members who are trained, briefed and sensitized in handling women victims and complainants.
- Spandana centres spread across the district, and each have video conferencing facility, it is easier and cheaper for people to lodge complaints.

Q.10) Consider the following statements regarding basholi paintings:

- 1. It is a reputed school of large wall paintings known for its vivid, evocative colors, bold lines, and deep-set facial patterns.
- 2. It is highly developed in southern states of Andhra Pradesh, Karnataka and Tamil Nadu. Which of the statements given above is/are correct?
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: D

Explanation: Basholi painting is a reputed school of miniature paintings known for its vivid, evocative colors, bold lines, and deep-set facial patterns.

- This style of painting saw its best years in the 17-18th century.
- Basholi (Basoli) is a town in Kathua district in the state of Jammu and Kashmir, India.
- It was founded by Raja Bhupat Pal in the 16th century.
- Basholi paintings are considered as the first school of Pahari paintings, many of which have evolved into the much more detailed and widespread style of Kangra painting school.
- The Basholi paintings had obscure beginnings, although Raja Bhupat Pal is widely credited as its founder.